

REMARKS

The drawing objection relating to claim 8 is traversed. Contrary to the Action, there is no requirement that the invention shown in the drawings be to scale or that dimensions of an invention be shown in the drawings. *Hockerson-Halberstadt*, 222 F.3d 951, 55 USPQ2d 1487 (Fed. Cir. 2000) (“patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.”); *see also*, 37 CFR 1.84(k) (“Standards for drawings: Scale: ... Indications such as “actual size” or “scale 1/2” on the drawings are not permitted since these lose their meaning with reproduction in a different format.” Claim 8 which depends on claim 1 requires the extracorporeal blood tube to have a “pump tube section” having a third inside diameter that is larger than the first end of the tube which has a first inside diameter. The structure of a pump tube section and a first end of the tube is shown in Figure 3, which fully satisfies the requirement that the drawings show the “features” of the claimed invention. 37 C.F.R. §1.83. While figure 3 does not show the dimensions of the claimed features, there is no requirement in section 1.83 that dimensions or scale been shown. The scale and relative dimensions of the pump tube section and first end of the tube are described in the text at paragraph 0020 of the specification.

The rejection of claim 29 as being anticipated by Sunden (US Patent 6,494,693) is traversed.

Sunden does not disclose the following limitation of claim 29:

wherein said narrow section comprises at least one half of an entire length of the blood tube and wherein said length of the blood tube includes the first end, first tapered tube transition section, narrow section, pump tube section, second tapered tube transition section and second end

The above limitation distinguish Sunden that shows a narrow diameter “pump tube” which is a short blood tube that engages a pump. The Sunden pump tube is of a length sufficient to fit into a pump. Sunden does not suggest that sections of a blood tube be narrow, other than at the pump tube. Further, Sunden does not teach a large diameter tube section in addition to a narrow blood tube as is recited in the rejected claims.

Contrary to the rejection, Figure 2A of Sunden does not indicate that the inlet portion end 12A and outlet portion end 12B of the pump tube shown are shorter than the pump section of the tube 14. In Sunden, the jagged ends of the inlet and outlet ends 12A, 12B in Figure 2A and the extended lengths of these inlet and outlet ends in Figure 1A indicate that the pump tube section is substantially shorter than the inlet and outlet ends. Further, the text of Sunden states that the inlet 12A is attached to a fluid container and the outlet end 12B is attached to another fluid container. Sunden, col. 7, lns. 19-25. The lengths of the inlet and outlet tube sections 12A, 12B needed to attach to containers is substantially longer than the narrow tube section that constitutes the pump tube. Accordingly, Sunden does not disclose a blood tube having a narrow section that

comprises at least one half the length of the blood tube and the anticipation rejection should be withdrawn.

The rejection of dependent claim 30 as being obvious over Sunden is traversed for the same reasons that the rejection of claim 29 is traversed.

Sunden teaches away from the claimed invention by disclosing a blood tube that has an inlet and outlet sections 12A, 12B that have large diameters and a short tube section aligned with the pump. Sunden does not suggest a narrow diameter section of the tube that is distinct from the pump tube section and the inlet and outlet sections, as is recited in claim 30. This disclosure in Sunden is contrary to the tube recited in claim 30 that has a pump tube section and a narrow tube section that is not part of the pump tube section. A reference that teaches away from a claimed invention, such as Sunden, should not be applied to support an obviousness rejection. *In re Geisler*, 43 U.S.P.Q.2d 1362 (Fed. Cir. 1997) ("a prima facie case of obviousness can be rebutted if the applicant ... (2) can show "that the art in any material respect taught away" from the claimed invention."). Further, the disclosure in Sunden of various diameters of blood tube sections is not a teaching, disclosure or suggestion of the specific blood tube recited in claim 30.

The rejection of claims 1, 2, 4 to 28 and 31 as being obvious over Sunden in view of Raible (U.S. Patent No. 4,954,055) is traversed.

The independent claims 1, 15, 19 and 31 require a narrow tube section that is at least as long as the entire length of the tube. In particular, these claims state "said narrow

section comprises at least one half of an entire length of the blood tube.” This feature is not shown in Sunden and is not suggested in Raible.

Sunden and Raible teach opposite approaches to a pump section of a blood tube. Sunden teaches a narrow tube section that engages a pump and Raible teaches a large diameter tube section to engage a pump. Given these conflicting teachings, it is not seen how the two references can be combined or the shape of a blood tube that would result from such a combination.

Sunden does not teach a narrow section that is at least one half the length of the blood tube for the reasons discussed above. Further, the claims define a “pump tube section” that is distinct from the narrow tube section. In contrast, Sunden discloses a small diameter pump tube section and provide no suggestion of the claimed narrow tube section that is distinct from the pump tube section.

Raible teaches away from the claimed invention by disclosing a tube having small diameter ends and a large diameter center section. Raible teaches away from a narrow section between the pump section of the tube and the inlet/outlet to the tubes, as is recited in the rejected claims. Accordingly, the combination of Raible and Sunden would not have rendered obvious independent claims 1, 15, 19 and 31.

Independent claim 27 requires a middle portion of the tube having a small inside diameter that is smaller than the inside diameter of a first end of the tube and a pump section of the tube having a cross-sectional passage area larger than that of the middle portion of the tube. As discussed above, Sunden does not disclose a middle section of a

blood tube that is distinct from the pump section of the tube and has the dimensional features recited in claim 27. Raible does not disclose a narrow diameter middle section of the blood tube. The combination of Sunden and Raible does not yield a blood tube as recited in claim 27.

With respect to the dependent claims, the combination of Raible and Sunden do not disclose:

- a narrow section that is not engaged with a pump, as recited in claim 2.
- a constant wall section, as recited in claims 5, 16, 17, 21, 22. Raible does not disclose the wall thickness of a blood tube. Sunden appears to show a change in the wall thickness in Figures 2B, 2C and 2D, but the text of Sunden does not discuss the wall section thickness of a blood tube.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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